

Length: 1906 July 7, 1996 12:35 Type: N Check: 7122 ..

1 CATTGGGTCA CGCGGTGGCG GCGCTCTAGA ATAGTGGATC CCCCgggGCTG  
51 CAGGAATTCTG ATTCGAGGCC ACGAAGGCCG GCGGCGCGGC GCAnGCACCG  
101 GCCCggggGAn AGGChCCATG AGCGGATCnC nGAACnATGA CAAAAGACAA  
151 TTTCTGCTGG AGCGACTGCT GGATGCAGTG AAACAGTGCC AGATCCGCTT  
201 TnGAGGGAGA AAGGAGATTG CCTCGGATTC CGACAGCAGG GTCACCTGTC  
251 TGTGTGCCCA GTTTGAAGCC GTCCTGCAGC ATGGCTTGAA GAGGAGTCGA  
301 GGATTGGCAC TCACAGCGGC AGCGATCAAG CAGGCAGCGG GCTTTGCCAG  
351 CAAAACCGAA ACAGAGCCCCG TGTTCTGGTA CTACGTGAAG GAGGTcCTCA  
401 ACAAGCACGA GCTGCAGCGC TTCTACTCCC TGCGCCACAT CGCCTCAGAc  
451 gTGGGCCGGG GTCGCGCCTG GCTGcGCTGT GCCCTCAACG AACACTCCCT  
501 GGAGCGCTAC CTGCACATGC TCCTGGCCGA CCGCTGCAGG CTGAGCACTT  
551 TTTATGAAGA CTGGTCTTTT GTGATGGaTG AAGAAAGGTC CAGTATGCTT  
601 CCTACCATGG CAGCAGGTCT GAACTCCATA CTCTTTGCGA TTAACATCGA  
651 CAACAAGGAT TTGAACGGGC AGAGTAAGTT TGCTCCCACC GTTTCAGACC  
701 TCTTAAAGGA GTCAACGCAG AACGTGACCT CCTTGCTGAA GGAGTCCACC  
751 CAAGGAGtGA GCAGCCTGTT CAGGGAGATC ACAGcCTcCT cTGCCGTcTC  
801 CATCctCATC AAACCTGAAC AGGAGACCGA CCCTTGcCTG TCGTGTCCAG  
851 GAATGTCAGT GCTGATGCCA AATGCAAAAA GGAGCGGAAG AAGAAAAAGA

FIG. 3A - |

901 AAGTGACCAA CATAATCTCA TTTGATGATG AGGAAGATGA GCAGAACTCT  
951 GGGGACGTGT TTAAAAAGAC ACCTGGGGCA GGGGAGAGCT CAGAGGACAA  
1001 CTCCGACCGC TCCTCTGTCA ATATCATGTC CGCCTTTGAA AGCCCCTTCG  
1051 GGCCTAACTC CAATGGAATC AGAGCAGCAA CTCATGGAAA ATTGATTCCC  
1101 TGTCTTTGAA CGGGGAGTTT GGGTACCAGA AGCTTGATGT GAAAAGCATC  
1151 GAtGAtGAAG ATgTGATGA AAACGAAGAT GACgTGTATG GAAACTCATC  
1201 AGGAAGGAAG CACAGGGGCC ACTCGGAGTC GCCCGAGAAG CCACTGGAAG  
1251 GGAACACCTg CCTCTCCcAG ATGCACAGCT GGgCtCCGCT GAAGgTgCTG  
1301 CaCAaTGACT CCGACATCCT CTTCCCTGTC AGTGGCGTGG gCTCCTACAG  
1351 CCCAGCAGAT gCCCCCCTCG GAAGCCTGGA GAACGGGACA GGACCAGAGG  
1401 ACCACGTTCT CCCGGATCCT GGACTTCGGT ACAGTGTGGA AGCCAGCTCT

FIG. ~~3B~~ 3A-2

1451 CCAGGCCACG GAAGTCCTCT GAGCAGCCTG TTACTTCTGC CTCAGTGCCA  
1501 GAGTCCATGA CAATTAGTGA ACTGCGCCAG GCCACTGTGG CCATGATGAA  
1551 CAGGAAGGAT GAGCTGGAGG AGGAGAACAG ATCACTGCGA AACCTGCTCG  
1601 ACGGTGAGAT GGAGCACTCA GCCGCGCTCC GGCAAGAGGT GGACACCTTG  
1651 AAAAGGAAGG TGGCTGAACA GGAGGAGCGG CAGGGCATGA AGGTCCAGGC  
1701 GCTGGCCAGC TATCTTTGCT ATTTTGTGAG GAGATTCTAA CCCCACGTGA  
1751 GAACCATGTG GTGGAGAAAT GGAGGGAGAG AGAAATCCAA CAGTTCCTGA  
1801 TAGTCTCATT TGAGCTCCTG GATCCAGTCT TTCCTGAAGC TGTGTTTCCT  
1851 CTGGACTTTT CATGTATGTG AGCCAATAAA TTGCTTTCAT TCCTTGAAAA  
1901 AAAAAA

FIG. ~~3~~ 3A-3

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TRANSLATE of: 9hhh check: 7122 from: 1 to: 1906  
generated symbols 1 to: 635.

9hhh.pep Length: 604 August 23, 1996 15:03 Type: P Check: 4554

1 XTGPGXGXMS GSXNXDKRQF LLERLLDAVK QCQIRFXGRK EIASDSDSRV  
51 TCLCAQFEAV LQHGLKRSRG LALTAATAIKQ AAGFASKTET EPVFWYYVKE  
101 VLNKHELQRF YSLRHIASDV GRGRAWLRCA LNEHSLZERYL HMLLADRCL  
151 STFYEDWSFV MDEERSMMLP TMAAGLNSIL FAINIDNKOL NGQSKFAPTV  
201 SDLLKESTQN VTSLLKESTQ GVSSLFREIT ASSAVSILIK PEQETDPCLS  
251 CPGMSVLMPN AKRSGARKRK \*PT\*SHLMMR KMSRTLGTCL KRHLGQGRAQ  
301 RTTPTAPLSI SCPPLKAPSG LTPMESEQQL MEN\*FPVFER GVWVPEA\*CE  
351 KHR\*\*RCG\*K RR\*RVWKLIP KEAQGPLGVA REATGREHLP LPDAQLGSAE  
401 GAAQ\*LRHPL PCQWRGLLOP SRCPPRKPGZ RDRTRGPRSP GSWTSVQCGS  
451 QLSRPRKSSE QPVTSASVPE SMTISELRQA TVAMMNRKDE LEEENRSLRN  
501 LLDGEMEHSALRQEVDTLK RKVAEQEERQ GMKVQALASY LCYFVRRF\*P  
551 HVRTMWWRNG GREKSNSS\*\* SHLSSWIQSF LKLCFLWTFH VCEPINCFS  
601 LKKK

FIG. 3B

~~8/46~~

clone 10 Length: 2631 August 23, 1996 17:18 Type: N Check: 5107 ..

1 CCCcTcTcAC AGCcCAGGCC ATCCcAGAGG GgCTGAGGAA AGAGCCCATC  
51 cACCGcGTGT cTGCAGcGGA GcTGGGAGGG AAGGTGAACC GGGCAcTACA  
101 GCAAGTGGGA GGTcTGAAGA GCCCTTGGAG GGGAGAATAT AAAGAACCAA  
151 GACATCCACc GCCAAATCAA GCCaAtTACC ACCAGACCcT CcATGCCcAg  
201 CCGAGAGAGc TtTcGCCAAG GGCCCCcAGGG CCCCCGGCCAg CTGAGGAGAC  
251 AACAggCAGA GCCCCcTAAGc TCCAGCcTCC TcTCCCACCA GAGCCCCCAG  
301 AGCCcAAACAA GTcTCCCTCCC ttGACTttGA GCAAGGAGGA GTcTGGGATG  
351 TGGGAACCCCT TACcTctGTC cTCCCTGGAG CCAGCCCCCTG CCAGAAACCC  
401 CAGcTCACCA GAGCGGAAAG CAACCGTCCC GGAGCAGGAA CTGCAGCAGC  
451 TGGAAATAGA ATTATTCCTC AACAGCCTGT CCCAGcCATT TtTcTGGAG  
501 GAGCAGGAGC AAATTCTcTc GTGCCTCAGC ATCGACAGCC TCTCCctGTC  
551 GGATGACAGT GAGAAGAACC CATCAAAGGC CTCTCAAAGC TCGCGGGACA  
601 CCCTGAGCTC AGGCGTACAC TCCTGGAGCA GcCAGGCCGA GcTcGAAGc  
651 TCCAGCTGGA ACATGGTGcT GGCCCGGGgg GgGCCcACCG ACACCCCAAG  
701 CTATTTCAAT GGTGTGAAAG TCCAAATACA GTCTCTTAAT GGTGAACACC  
751 TGCACATCCG GGAGTTCCAC CGGGTCAAAG TGGGAGACAT CGCCACTGGC  
801 ATCAGCAGCC AGATCCCAGC TGCAGCCTTC AGCTTGGTCA CCAAAGACGG  
851 GCAGCCTGTT CGCTACGACA TGGAGGTGCC AGACTCGGGC ATCGACCTGC  
901 AGTGCACACT GGGCCCTGAT GGCAGCTTCG CCTGGAGCTG GAGGCTCAAG  
951 CATGGCCAGC TGGAGAACAG GCCCTAACCC TGCCCTCCAC CGCCGGcTCC  
1001 ACACTGCCCGG aAAGCAGCCT TCCTGCTCGG tGCACGATGC TGCCCTGaAA  
1051 AcACAGGcTC AGCcGTTCCC AgGGgATyTG .CCAGcCCCC cGGcTcArCA  
1101 G.tGGGaAcC AGGGcctcG. CAGC.AGC.A AGGT.gGGGG CAAGC.AGAA  
1151 TGCcTCCCAG GATTTcACA. CcTGAGCCC. TGCCCCA.CC cTGcTgaada  
1201 AAaAyT.CC GCcAcGtGAA GAgAcAGaAG GAGGATGG.C AGGAgtt..A  
1251 CcTygGGGAA aCaAAACAGg gaTcTTt.tT cTGcCCcTGc TCCAGT.cGA

FIG. ~~4~~ 4-1

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1301 gttGGCCTG. ACCCGcTTGG A.TCAgtGAC CATTtGtTGG CAGA.CAGGG  
1351 GagAgCAGcT TCCAGCcTGG gTCAGAAGGG GTGGGcGAGC CcTtGgGCCC  
1401 cTcAcCCT.c cAGGcTGcTG tG.AGAGTGT CAAGTGTtGTA AGGG.CCCAA  
1451 A.cTcAGG.T TCAgTGcAGA ACCAgGT.CA GCAGSTATGC CCGCCCCG.TA  
1501 GGTAA..GG GGGCCcTcT. AAACCCCTTG cCT.GGCCT. CAcCT.GGCC  
1551 AGCTCA.CCC cTTTTGGGTG TAGGGGAAAA GAATGCCTGA CCCTGGGAAG  
1601 GCTWCCCTGG TAgaATACAC CACACTTTTC AGGTTGTTGC AACACAGGTC  
1651 CTGAGTTGAC CTCTGGTTCA GCCAAGGACC AAAGAAGGTG TGTAAGTGAA  
1701 GTGGTTCTCA gT.CCCCAgA CATgTgCCCC TTTGCTGCTG GCTACCACTC  
1751 TTCCCCAgAg CAGCAGGcCC CgAgCCCCCTT CAGGcCCAgC AcTGcCCCCAG  
1801 AcTCgCTGGC aCTCAGTTCC CTCATCTGTA AAGGTGAAGG GTGATGCAGG  
  
1851 ATATGCCTGA CAGGAACAGT CTGTGGAtGG AcATGATCAg TGcT.AAGG.  
1901 AAAGCAGcAG AGaGAGACgy TCCGGCGCCC CAg.CCCCAc T.ATCAGTgT  
1951 .CCAgCGTGC T.GGTT.CCC CAg.AGCACA GcT.CAg.CA TcA.CACTGA  
2001 CACT.CAcCC T.GCCcTGCC CcT.GGCCA. GAgGGTACTG CCG.ACGGCA  
2051 CTTTGCAc.T CTGATG.ACC TCAAAGCACT TTCATGgcT. GcCCTcT..G  
2101 GCAGGG.CAG GG.CAGGG.C AgTGAcA.CT GTAqG.AGCA TA.gCAA.GC  
2151 CAqGAGATGG GGTG.AAGGG A.CACAGTCT TGAGCTGTCC A.CATGCATG  
2201 TGAcT.CCTC AAAcCTcTT. .CCAG.ATTT CTCTAAGAAT AGCA.CCCCC  
2251 TT.CCCCATTT GCCCCAGCTT AgCCTCTTCT CCCAGGGGAG CTA.CTCAgG  
2301 ACTCACGTAg CATTAAATCA GCTGTG.AAT CGTCAGGGGG TGTCTGCTAg  
2351 CCTCAACCTC CTGGGGCaGG GGACgCCGAg ACTCCGTGGG AgAAgCTCAT  
2401 TCCcCaCATCT TGCCAAGACA gCCTTT.GTC CAgCTGTCCA CATTGAgtCA  
2451 gACTGCTCCC GGGGAgAgAg cCCCCGcCCC CAgCACATAA AGAACTGCAG  
2501 CCTTGGTACT GCAGAGTCTG GGTGTAGAG AACTCTTTGT AAGCAATAAA  
2551 GTTTGGGGTG ATGACAAATG TTAAAAAAG GCCTTCGTGG CCTCGAATCA  
2601 AGCTTATCGA TACCGTCGAC CTCGAGGGGG G

FIG. 4-2

~~12/46~~

1 AGC GGG GGG ACT GTG CCG TGT GGA ACG TGT AGC TGT TGA AGG TGG ACT CTG TTA CCA TTG  
31  
61 AGG ATG TTT GGA GGA TGA GTA TGT GTG GCA GAG GCA CAC ATA AAC AGG CAG AGA CCC TTT  
91  
121 GCC CCT GCC TTT CTC CCC CAA CCC AAG GCT GAC CTG TGT TCT CCC AGG TCT GGG ATT CTA  
151  
181 AGT GAC CTG CTC TGT GTT TGG TCT CTC TCA GGA TGA GCA CAA GCC TGG GAG ATG GCA GTG  
211  
241 ATG GAA ATG GCC TGC CCA GGT GCC CCT GGC TCA GCA GTG GGG CAG CAG AAG GAA CTC CCC  
271  
M E M A C P G A P G S A V G Q Q K E L P  
301 AAG CCA AAG GAG AAG ACG CCG CCA CTG GGG AAG AAA CAG AGC TCC GTC TAC AAG CTT GAG  
331  
K P K E K T P P P L G K Q S S V Y K L E  
361 GCC GTG GAG AAG AGC CCT GTG TTC TGC GGA AAG TGG GAG ATC CTG AAT GAC GTG ATT ACC  
391  
A V E K S P V F C G K W E I L N D V I T  
421 AAG GGC ACA GCC AAG GAA GGC TCC GAG GCA GGG CCA GCT GCC ATC TCT ATC ATC GCC CAG  
451  
K G T A K E G S E A G P A A I S I A Q  
481 GCT GAG TGT GAG AAT AGC CAA GAG TTC AGC CCC ACC TTT TCA GAA CGC ATT TTC ATC GCT  
511  
A E C E N S Q E F S P T F S E R I F I A  
541 GGG TCC AAA CAG TAC AGC CAG TCC GAG AGT CTT GAT CAG ATC CCC AAC AAT GTG GCC CAT  
571  
G S K Q Y S S Q S E S L D Q I P N N V A H

~~FIG. 6A~~

FIG. 6-1

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601 GCT ACA GAG GGC AAA ATG GCC CGT GTG TGT TGG AAG GGA AAG CGT CGC AGC AAA GCC CGG  
A T E G K M A R V C W K G K R R S K A R  
661 AAG AAA CGG AAG AAG AGC TCA AAG TCC CTG GCT CAT GCA GGA GTG GCC TTG GCC AAA  
K K R K K S S K S L A H A G V A L A K  
721 CCC CTC CCC AGG ACC CCT GAG CAG GAG AGC TGC ACC ATC CCA GTG CAG GAG GAT GAG TCT  
P L P R T P E Q E S C T I P V Q E D E S  
781 CCA CTC GGC GCC CCA TAT GTT AGA AAC ACC CCG CAG TTC ACC AAG CCT CTG AAG GAA CCA  
P L G A P Y V R N T P Q F T K P L K E P  
841 GGC CTT GGG CAA CTC TGT TTT AAG CAG CTT GGC GAG GGC CTA CGG CCG GCT CTG CCT CGA  
G L G Q L C F K Q L G E G L R P A L P R  
901 TCA GAA CTC CAC AAA CTG ATC AGC CCC TTG CAA TGT CTG AAC CAC GTG TGG AAA CTG CAC  
S E L H K L I S P L Q C L N H V W K L H  
961 CAC CCC CAG GAC GGA GGC CCC CTG CCC CTG CCC AGC CAC CCC TTC CCC TAT AGC AGA CTG  
H P Q D G G P L P L P L P T H P F P Y S R L  
1021 CCT CAT CCC TTC CCA TTC CAC CCT CTC CAG CCC TGG AAA CCT CAC CCT CTG GAG TCC TTC  
P H P F P F H P L Q P W K P H P L E S F  
1081 CTG GGC AAA CTG GCC TGT GTA GAC AGC CAG AAA CCC TTG CCT GAC CCA CAC CTG AGC AAA  
L G K L A C V D S Q K P L P D P H L S K  
1141 CTG GCC TGT GTA GAC AGT CCA AAG CCC CTG CCT GGC CCA CAC CTG GAG CCC AGC TGC CTG  
L A C V D S P K P L P G P H L E P S C L  
1201 TCT CGT GGT GCC CAT GAG AAG TTT TCT GTG GAG GAA TAC CTA GTG CAT GCT CTG CAA GGC  
S R G A H E K F S V E Y L V H A L Q G  
1261 AGC GTG AGC TCA AGC CAG GCC CAC AGC CTG ACC AGC CTG GGC AAG ACC TGG GCA GCA CGG  
S V S S S Q A H S L T S L A K T W A A R

FIG. 6-2

FIG. 6B



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1321 GGC TCC AGA TCC CGG GAG CCC AGC CCC AAA ACT GAG GAC AAC GAG GGT GTC CTC CTC ACT  
G S R S R E P S P K T E D N E G V L L T  
1381 GAG AAA CTC AAG CCA GTG GAT TAT GAG TAC CGA GAA GTC CAC TGG GCC ACG CAC CAG  
E K L K P V D Y E Y R E E V H W A T H Q  
1441 CTC CGC CTG GGC AGA GGC TCC TTC GGA GAG GTG CAC AGG ATG GAG GAC AAG CAG ACT GGC  
L R L G R G S F G E V H R M E D K Q T G  
1501 TTC CAG TGC GCT GTC AAA AAG GTG GGC CTC GAA GAA TTT CGG GCA GAG GAG CTG ATG GCA  
F Q C A V K K V R L E V F R A E E L M A

1561 TGT GCA GGA TTG ACC TCA CCC AGA ATT GTC CCT TTG TAT GGA GCT GTG AGA GAA GGG CCT  
C A G L T S P R I V P L Y G A V R E G P  
1621 TGG GTC AAC ATC TTC ATG GAG CTG CTG GAA GGT GGC TCC CTG GGC CAG CTG GTC AAG GAG  
W V N I F M E L L E G G S L G Q L V K E  
1681 CAG GGC TGT CTC CCA GAG GAC CGG GCC CTG TAC TAC CTG GGC CAG GCC CTG GAG GGT CTG  
Q G C L P E D R A L Y Y L G Q A L E G L  
1741 GAA TAC CTC CAC TCA CGA AGG ATT CTG CAT GGG GAC GTC AAA GCT GAC AAC GTG CTC CTG  
E Y L H S R R I L H G D V K A D N V L L  
1801 TCC AGC GAT GGG AGC CAC GCA GCC CTC TGT GAC TTT GGC CAT GCT GTG TGT CTT CAA CCT  
S S D G S H A A L C D F G H A V C L Q P  
1861 GAT GGC CTG GGA AAG TCC TTG CTC ACA GGG GAC TAC ATC CCT GGC ACA GAG ACC CAC ATG  
D G L G K S L L T G D Y I P G T E T H M  
1921 GCT CCG GAG GTG GTG CTG GGC AGG AGC TGC GAC GCC AAG GTG GAT GTC TGG AGC AGC TGC  
A P E V V L G R S C D A K V D V W S S C

FIG. 6C

FIG. 6-3

1981 TGT ATG CTG CAC ATG CTC AAC GGC TGC CAC CCC TGG ACT CAG TTC TTC CGA GGG CCG  
C M L H M L N G C H P W T Q F F R G P

2041 CTC TGC CTC AAG ATT GCC AGC GAG CCT CCG CCT GTG AGG GAG ATC CCA CCC TCC TGC GCC  
L C L K I A S E P P P V R E I P P S C A

2101 CCT CTC ACA GCC CAG GCC ATC CAA GAG GGG CTG AGG AAA GAG CCC ATC CAC CGC GTG TCT  
P L T A Q A I Q E G L R K E P I H R V S

2161 GCA GCG GAG CTG GGA GGG AAG GTG AAC CCG GCA CTA CAG CAA GTG GGA GGT CTG AAG AGC  
A A E L G G K V N R A L Q Q V G G L K S

2221 CCT TGG AGG GGA GAA TAT AAA CCA AGA CAT CCA CCG CCA AAT CAA GCC AAT TAC CAC  
P W R G E Y K E P R H P P P N Q A N Y H

2281 CAG ACC CTC CAT GCC CAG CCG AGA GAG CTT TCG CCA AGG GCC CCA GGG CCC CGG CCA GCT  
Q T L H A Q P R E L S P R A P G P R P A

2341 GAG GAG ACA ACA GGC AGA GCC CCT AAG CTC CAG CCT CCT CTC CCA CCA GAG CCC CCA GAG  
E E T T G R A P K L Q P P L P P E P P E

2401 CCA AAC AAG TCT CCT CCC TTG ACT TTG AGC AAG GAG GAG TCT GGG ATG TGG GAA CCC TTA  
P N K S P P L T L S K E E S G M W E P L

2461 CCT CTG TCC TCC CTG GAG CCA GCC CCT GGC AGA AAC CCC AGC TCA CCA GAG CGG AAA GCA  
P L S S L E P A P A R N P S S P E R K A

2521 ACC GTC CCG GAG CAG GAA CTG CAG CAG CTG GAA ATA GAA TTA TTC CTC AAC AGC CTG TCC  
T V P E Q E L Q Q L E I E L F L N S L S

2581 CAG CCA TTT TCT CTG GAG GAG CAA ATT CTC TCG TGC CTC AGC ATC GAC AGC CTC  
Q P F S L E E Q E Q I L S C L S I D S L

2641 TCC CTG TCG GAT GAC ACT GAG AAG AAC CCA TCA AAG GCC TCT CAA AGC TCG CGG GAC ACC  
S L S D D S E K N P S K A S Q S S R D T

2701 CTG AGC TCA GGC GTA CAC TCC TGG AGC AGC GGC GAG GGT CGA AGC TCC AGC TGG AAC  
L S S G V H S W S S Q A E A R S S S W N

2761 ATG GTG CTC GCC CCG GGG CCG CCC ACC GAC ACC CCA AGC TAT TTC AAT GGT GTG AAA GTC  
M V L A R G R P T D T P S Y F N G V K V

FIG. 6D

2821 CAA ATA CAG TCT CTT AAT GGT GAA CAC CTG CAC ATC CGG GAG TTC CAC CGG GTC AAA GTG  
Q I Q S L N G E H L H I R E F H R V K V  
2881 GGA GAC ATC GCC ACT GGC ATC AGC AGC CAG ATC CCA GCT GCA GCC TTC AGC TTG GTC ACC  
G D I A T G I S S Q I P A A A F S L V T  
2941 AAA GAC GGG CAG CCT GTT CGC TAC GAC ATG GAG GTG CCA GAC TCG GGC ATC GAC CTG CAG  
K D G Q P V R Y D M E V P D S G I D L Q  
3001 TGC ACA CTG GCC CCT GAT GGC AGC TTC GCC TGG AGC TGG AGG GTC AAG CAT GGC CAG CTG  
C T L A P D G S F A W S W R V K H G Q L  
3061 GAG AAC AGG CCC TAA CCC TGC CCT CCA CCG GGT CCA CAC TGC CGG AAA GCA GGC TTC  
E N R P \*  
3121 CTG CTC GGT GCA CGA TGC TGC CCT GAA AAC ACA GGC TCA GCC GTT CCC AGG GGA TTG CCA  
3181 GCC CCC CGG CTC ACA GTG GGA ACC AGG GCC TCG CAG CAG CAA GGT GGG GGC AAG CAG AAT  
3241 GCC TCC CAG GAT TTC ACA CCT GAG CCC TGC CCC ACC CTG CTG AAA AAA CAT CCG CCA CGT  
3301 GAA GAG ACA GAA GGA TGG CAG GAG TTA CCT GGG GAA ACA AAA CAG GGA TCT TTT TCT  
3361 GCC CCT GCT CCA GTC GAG TTG GCC TGA CCC GCT TGG ATC AGT GAC CAT TTG TTG GCA GAC  
3421 AGG GGA GAG CAG CTT CCA GCC TGG GTC AGA AGG GGT GGG CGA GCC CTT CGG CCC CTC ACC

Fig. 6F

Fig. 6-5

3481 3511  
CTC CAG GCT GCT GTG AGA GTG TCA AGT GTG TAA GGG CCC AAA CTC AGG TTC AGT GCA GAA

3541 3571  
CCA GGT CAG CAG GTA TGC CCG CCC GTA GGT TAA GGG GGC CCT CTA AAC CCC TTG CCT GGC

3601 3631  
CTC ACC TGG CCA GCT CAC CCC TTT TGG GTG TAG GGG AAA AGA ATG CCT GAC CCT GGG AAG

3661 3691  
GCT CCC TGG TAG AAT ACA CCA CAC TTT TCA GGT TGT TGC AAC ACA GGT CCT GAG TTG ACC

3721 3751  
TCT GGT TCA GCC AAG GAC CAA AGA AGG TGT GTA AGT GAA GTG GTT CTC AGT CCC CAG ACA

3781 3811  
TGT GCC CCT TTG CTG CTG GCT ACC ACT CTT CCC CAG AGC AGC CCC CGA GCC CCT TCA

3841 3871  
GGC CCA GCA CTG CCC CAG ACT CGC TGG CAC TCA GTT CCC TCA TCT GTA AAG GTG AAG GGT

3901 3931  
GAT GCA GGA TAT GCC TGA CAG GAA CAG TCT GTG GAT GGA CAT GAT CAG TGC TAA GGA AAG

3961 3991  
CAG CAG AGA GAG ACG TCC GGC GCC CCA GGC CCA CTA TCA GTG TCC AGC GTG CTG GTT CCC

4021 4051  
CAG AGC ACA GCT CAG CAT CAC ACT GAC ACT CAC CCT GCC CTG CCC CTG GCC AGA GGG TAC

4081 4111  
TGC CGA CGG CAC TTT GCA CTC TGA TGA CCT CAA AGC ACT TTC ATG GCT GCC CTC TGG CAG

~~FIG. 6F~~

FIG. 6-6

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4141 GGC AGG GCA GGG CAG TGA CAC TGT AGG AGC ATA GCA AGC CAG GAG ATG GGG TGA AGG GAC 4171  
4201 ACA GTC TTG AGC TGT CCA CAT GCA TGT GAC TCC TCA AAC CTC TTC CAG ATT TCT CTA AGA 4231  
4261 ATA GCA CCC CCT TCC CCA TTG CCC CAG CTT AGC CTC TTC TCC CAG GGG AGC TAC TCA GGA 4291  
4321 CTC ACG TAG CAT TAA ATC AGC TGT GAA TCG TCA GGG GGT GTC TAG CCT CAA CCT CCT 4351  
4381 GGG GCA GGG GAC GCC GAG ACT CCG TGG GAG AAG CTC ATT CCC ACA TCT TGC CAA GAC AGC 4411  
4441 CTT TGT CCA GCT GTC CAC ATT GAG TCA GAC TGC TCC CGG GGA GAG AGC CCC GGC CCC CAG 4471  
4501 CAC ATA AAG AAC TGC AGC CTT GGT ACT GCA GAG TCT GGG TTG TAG AGA ACT CTT TGT AAG 4531  
4561 CAA TAA AGT TTG GGG TGA TGA CAA ATG TTA AAA AAA 4596

FIG. 6-7

FIG. 6G

~~19/46~~

[illegible]

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FIG. 7A

**SUBSTITUTE SHEET (RULE 26)**

WO 97/37016

~~PCT/TL97/00117~~

~~20746~~

Fig. 2-7

55 55 58 56 52 57 59 54 53

FIG. 7B

~~SUBSTITUTE SHEET (RULE 26)~~

Fig. 7-3

~~FIG 7C~~

~~UTE SHE~~





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517

~~FIG. 7E~~

WO 97/37016

PCT/DL97/00117

~~24/46~~

369  
 S E S S L I W S L F G S G I G E E A P T K P N P O G H S L S S E N 399  
 258  
 S Y W P N L K K M Y K D K P I T N T A E F T A R I D V M N S W L N 299

7-6

FIG. 7F

~~SUBSTITUTE SHEET (RULE 26)~~

~~FIG. 7G~~

~~E SHEET~~

WO 97/37016

PCT/DL97/00117

~~26/46~~

[illegible]

8-7-8

FIG. 7H

~~SUBSTITUTE SHEET (RULE 26)~~

Fig. 7-9

**SUBSTITUTE SHEET (RULE 26)**

WVO 97/37016

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[illegible]

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FIG. 7J

~~SUBSTITUTE SHEET (RULE 26)~~

~~29/46~~

s3 s4 s9 s7 s2 s6 s8 s1 s5 s3 s4 s9 s7 s2 s6 s8 s1 s5

11-7-97



ANNOTATED SHEET SHOWING CHANGES  
Appln. No. 09/155,676

WO 97/37016

PCT/IL97/00117

30/46

S3	1	FS	102	123
S4	1	LL	156	188
S9	1	VS	715	747
S7	1	VT	13	45
S2	102	SG	604	636
S6				
S8				
S1				
S5				

S3	1	TE	124	147
S4	1	DV	189	212
S9	1	PK	748	780
S7	1	LG	46	78
S2	124	SIG	637	669
S6				
S8				
S1				
S5				

FIG. 7L

SUBSTITUTE SHEET (RULE 26)

Fig 7-12

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[illegible]

Fig. 7-13

~~FIG. 7M~~

**SUBSTITUTE SHEET (RULE 26)**

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FIG. 7N

~~SUBSTITUTE SHEET (RULE 26)~~

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[illegible][illegible]

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~~FIG. 70~~

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~~FIG. 7P~~

~~SUBSTITUTE SHEET (RULE 26)~~

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FIG. 7Q

ANNOTATED SHEET SHOWING CHANGES  
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S3	75	S	V	R	Y	G	I	V	E	D	L	-	L	A	A	N	H	S	N	T	T	K	I	E	V	R	C	H	P	-	-	-	103		
S4	75	S	V	H	Y	G	I	V	E	D	L	-	L	A	A	N	H	S	N	T	A	K	I	E	M	G	Q	R	P	-	-	-	103		
S9	344	S	V	S	S	Q	A	H	S	-	-	-	T	S	L	A	K	T	W	A	R	G	S	R	S	R	E	P	S	K	T	E	375		
S7	57	S	I	R	K	S	S	I	G	I	F	S	K	A	H	I	P	A	R	S	I	S	K	A	E	L	P	A	K	A	R	K	D	89	
S2	380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	T	L	E	E	D	T	D	D	S	I	-	-	-	-	-	-	392		
S6	393	-	-	-	-	-	-	-	-	-	-	-	-	-	-	H	D	F	F	G	E	S	D	I	V	S	I	P	I	K	I	A	T	P	412
S8	1103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	K	A	K	Q	P	Y	R	E	D	A	E	-	-	-	-	-	-	1135	
S1	391	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	402		
S5	982	E	I	I	N	S	R	L	R	L	E	A	I	K	T	E	K	T	M	K	R	N	P	R	Q	M	G	K	V	L	D	A	T	D	1014
S3	104	Q	E	S	G	I	L	L	N	M	-	-	-	-	-	V	I	S	P	Q	N	G	R	Y	Q	I	D	S	D	V	L	V	B	131	
S4	104	Q	E	S	G	I	L	L	N	M	-	-	-	-	-	V	I	T	P	Q	N	G	R	Y	Q	I	D	S	D	V	L	V	B	131	
S9	376	D	N	E	G	V	L	L	T	E	-	-	-	-	-	K	L	K	P	V	D	-	-	-	-	-	-	-	-	-	-	-	401		
S7	90	D	T	P	P	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94		
S2	393	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	393		
S6	413	K	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	414		
S8	1136	K	L	K	R	Q	N	T	K	M	W	G	T	R	M	V	E	T	E	N	H	M	V	S	I	N	K	A	N	S	K	G	-	1168	
S1	403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	403		
S5	1015	G	N	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1027		

FIG. 7R

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s3	132	W	K	L	T	Y	R	S	G	S	G	F	V	P	R	G	A	F	G	K	V	Y	L	A	Q	D	M	K	J	K	G	F	M	164				
s4	132	W	K	L	T	Y	R	N	G	S	D	F	T	P	R	G	A	F	G	K	V	Y	L	A	Q	D	M	K	J	K	G	F	M	164				
s9	402	H	Q	L	R	-	-	-	-	-	-	-	L	G	H	G	S	F	G	E	R	Q	Q	V	Y	L	A	Q	D	M	K	J	K	G	F	M	426	
s7	95	-	-	-	-	-	-	-	-	-	-	-	T	G	C	G	A	F	G	E	R	Q	Q	V	Y	L	A	Q	D	M	K	J	K	G	F	M	122	
s2	394	-	-	-	-	-	-	-	-	-	-	-	T	G	C	G	A	F	G	E	R	Q	Q	V	Y	L	A	Q	D	M	K	J	K	G	F	M	420	
s6	415	-	-	-	-	-	-	-	-	-	-	-	T	G	C	G	A	F	G	E	R	Q	Q	V	Y	L	A	Q	D	M	K	J	K	G	F	M	442	
s8	1169	E	Y	K	E	F	A	W	M	K	G	E	M	I	G	K	G	A	F	G	E	R	Q	Q	V	Y	L	A	Q	D	M	K	J	K	G	F	M	1201
s1	403	-	-	-	-	-	-	-	-	-	-	-	I	G	K	G	A	F	G	E	R	Q	Q	V	Y	L	A	Q	D	M	K	J	K	G	F	M	429	
s5	1028	S	N	V	S	M	R	W	Q	K	R	S	F	I	G	G	G	A	F	G	E	R	Q	Q	V	Y	L	A	Q	D	M	K	J	K	G	F	M	1060
s3	165	A	C	K	L	I	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169		
s4	165	A	C	K	L	I	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169		
s9	427	A	C	K	L	I	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	431		
s7	123	A	C	K	L	I	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	127		
s2	421	A	C	K	L	I	I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	425		
s6	443	V	K	Q	V	E	I	K	N	N	I	G	V	P	T	D	N	N	K	Q	A	N	S	D	E	N	N	E	Q	E	E	Q	Q	Q	Q	Q	475	
s8	1202	A	V	K	Q	V	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1207		
s1	430	A	V	K	Q	V	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	436		
s5	1061	A	V	K	Q	V	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1068		

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FIG. 7S



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182	182	444	153	451	509	1232	458	1087
S3	S4	S9	S7	S2	S6	S8	S1	S5

720 Fe

FIG. 7T

SUBSTITUTE SHEET (RULE 26)

s3	215	VLE	EKL	ESCG	PGMP	REER	FEFE	IIII	-	-	WV	TK	KH	VV	LL	KG	DE	LI	SS	246
s4	215	VLE	EKL	ESCG	PGMP	REER	FEFE	IIII	-	-	WV	TK	KH	VV	LL	KG	DE	LI	SS	246
s9	477	LGO	LSL	KEQG	GLPG	PEPE	DRSV	ARR	-	-	YY	TK	QA	VL	LL	KG	DE	LI	SS	508
s7	186	IS	SL	GKFF	GLPG	PEPE	STLV	VRN	-	-	MY	TK	QA	VL	LL	KG	DE	LI	SS	217
s2	484	VAG	SL	TMYG	GLPG	PEPE	TLVN	VRN	-	-	FT	TK	QA	VL	LL	KG	DE	LI	SS	515
s6	542	SS	LL	NYGR	GLPG	PEPE	TLVN	VRN	-	-	FT	TK	QA	VL	LL	KG	DE	LI	SS	573
s8	1265	VGS	LL	RMYG	GLPG	PEPE	PLVN	VRN	-	-	FT	TK	QA	VL	LL	KG	DE	LI	SS	1296
s1	491	VAS	LL	SKYG	GLPG	PEPE	PLVN	VRN	-	-	FT	TK	QA	VL	LL	KG	DE	LI	SS	522
s5	1120	LAS	LL	D-HG	GLPG	PEPE	EMVN	VRN	-	-	FT	TK	QA	VL	LL	KG	DE	LI	SS	1151
s3	247	KKV	ILH	HD	IK	PS	IV	FM	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	275
s4	247	KKV	ILH	HD	IK	PS	IV	FM	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	275
s9	509	RR	ILH	GD	IK	PS	IV	FM	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	541
s7	218	NG	ILH	RD	IK	PS	IV	FM	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	249
s2	516	RG	ILH	RD	IK	PS	IV	FM	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	547
s6	574	NI	HRD	IK	PS	IV	FM	-	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	604
s8	1297	KG	HRD	IK	PS	IV	FM	-	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	1327
s1	523	NQ	HRD	IK	PS	IV	FM	-	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	555
s5	1152	SGV	HRD	IK	PS	IV	FM	-	-	-	TK	AV	VL	VV	DD	FG	LS	VV	-	1183

FIG. 7-24

~~FIG. 7U~~

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s3	295	S	P	E	V	L	O	R	-	-	-	G	S	T	K	A	D	Y	S	L	G	A	T	L	H	M	G	G	G	G	324			
s4	295	S	P	E	V	L	O	R	-	-	-	G	H	S	T	K	A	D	Y	S	L	G	A	T	L	H	M	G	G	G	324			
s9	564	A	P	E	V	V	L	G	H	-	-	S	C	D	A	K	V	D	V	S	S	G	G	M	M	L	N	G	G	G	593			
s7	269	A	P	E	V	V	L	Q	T	-	-	G	H	S	F	S	A	D	W	S	V	G	G	T	E	M	A	T	G	K	298			
s2	571	A	P	E	V	V	K	Q	T	M	H	T	-	-	E	K	T	D	W	S	L	G	C	V	E	E	M	L	T	S	K	600		
s6	626	P	E	V	V	K	Q	T	A	T	T	-	-	A	K	A	D	I	W	S	T	G	C	V	E	E	M	F	T	G	K	H	655	
s8	1347	A	P	E	M	V	D	T	K	Q	G	Y	S	-	-	A	K	V	D	I	W	S	L	G	C	V	E	E	M	F	A	G	K	1377
s1	517	A	P	E	V	L	R	G	Q	Q	-	Y	G	-	-	R	S	E	D	V	W	S	V	G	C	A	I	E	E	A	C	A	K	606
s5	1217	A	P	E	T	I	S	G	S	A	V	K	G	K	E	A	D	D	V	W	A	L	G	C	V	E	E	M	A	T	G	R	1240	

Fig 7-22

FIG. 7V

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S3	325	P	P	W	V	-	-	K	H	V	P	R	S	A	V	P	S	V	L	Y	I	I	K	A	S	E	H	P	I	P	E	D	I	A	G	355
S4	325	P	P	W	V	-	-	K	H	V	P	R	S	A	V	P	S	V	L	Y	I	I	K	A	S	E	H	P	I	P	E	D	I	A	G	355
S9	594	H	P	W	T	-	-	Q	F	F	R	G	P	A	C	L	F	H	I	K	A	S	E	H	P	I	P	E	D	I	A	G	620			
S7	299	H	P	W	S	-	-	Q	Q	N	C	Q	M	Q	A	I	F	R	I	G	N	-	-	-	-	-	-	-	-	-	-	-	-	-	329	
S2	601	H	P	Y	-	-	-	P	N	C	S	Q	M	Q	A	I	F	R	I	G	N	-	-	-	-	-	-	-	-	-	-	-	-	-	625	
S6	656	H	P	-	-	-	-	P	D	F	S	Q	M	Q	A	I	F	R	I	G	N	-	-	-	-	-	-	-	-	-	-	-	-	-	680	
S8	1378	R	P	W	-	-	-	S	N	L	S	E	V	A	A	I	M	H	V	A	G	R	I	P	Q	L	P	N	R	D	-	-	-	-	1407	
S1	607	R	P	W	N	A	E	K	H	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	635		
S5	1250	R	P	W	S	N	L	D	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1277		

S3	356	D	C	S	S	-	-	P	G	M	R	E	A	C	K	D	I	B	F	N	F	A	-	-	-	-	-	-	-	-	-	-	-	-	-	382
S4	356	D	C	S	S	-	-	P	G	M	R	E	A	C	K	D	I	B	F	N	F	A	-	-	-	-	-	-	-	-	-	-	-	-	-	382
S9	621	S	C	A	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	653		
S7	330	S	C	A	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	358		
S2	626	S	C	A	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	658		
S6	681	S	C	A	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	713		
S8	1408	S	C	A	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1440		
S1	636	S	C	A	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	668		
S5	1278	S	C	A	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1310		

FIG. 7-23

FIG. 7W

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[illegible]

Fig 7-24

~~FIG. 7X~~

**SUBSTITUTE SHEET (RULE 26)**

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418	S3	EU	PE	EN	AD	SS	GC	GS	TE	ES	EM	VL	RL	RC	ES	TS	LY	PL	GA	450
418	S4	EU	PE	EN	AD	SS	GC	GS	TE	ES	EM	VL	RL	RC	ES	TS	LY	PL	GA	450
720	S9	EU	PE	EN	AD	SS	GC	GS	TE	ES	EM	VL	RL	RC	ES	TS	LY	PL	GA	752
425	S7	EU	PE	EN	AD	SS	GC	GS	TE	ES	EM	VL	RL	RC	ES	TS	LY	PL	GA	457
	S2	ES	LV	KL	GN	SD	DD	MC	QM	DN	DD	FM	FG	AS	VK	CS	SD			659
	S6																			717
	S8																			1478
	S1																			672
	S5																			1314
451	S3																			461
451	S4																			461
753	S9	AR	NP	SS	PER	KAT	VPE	QEL	QQ	LE										785
458	S7	HS	PA	NY	KS	FN	PM	CE	PD	ND	WP	CK	FE	DS	PE	LL	KS	Q		490
	S2																			659
	S6																			717
	S8																			1478
	S1																			672
	S5																			1314

FIG. 7-25

FIG. 7Y

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[illegible]

Fig 7-26

FIG. 72

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[illegible]

Fig 7-27

~~FIG. 7AA~~



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[illegible]

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FIG. 7BB